

ENTOMOLOGY.—*Five mites of the family Ereyneidae from Mexico.*¹ EDWARD W. BAKER, Bureau of Entomology and Plant Quarantine. (Communicated by ALAN STONE.)

The mites of the family Ereyneidae are prostigmatic and in addition are characterized by the two pairs of long, finely pilose, sensory hairs, one pair on the thorax and the other on the rear of the abdomen; by the 3- or 5-segmented palpus; and by the presence of two pairs of genital cups. Most of the species are known from Europe, the majority of these being parasites or "pseudoparasites" on snails and insects, although some are found in moss or on plants. Of the five species presented in this paper, one is already known from snails in Holland, while the others appear to be new. Type slides, as well as a slide of the snail-inhabiting species, have been deposited in the United States National Museum, Washington, D. C.

Genus *Riccardoella* Berlese
Riccardoella oudemansi Sig Thor

Fig. 1

Riccardoella oudemansi Sig Thor, Zool. Anz. 99: 249, figs. 1-17, 1932; Das Tierreich 60: 63, figs. 71-87, 1933.

(Description after Sig Thor, 1933. Translated by the author.) Body broad, egg-shaped, rounded, not segmented. Color yellowish or reddish white, with a broad dorsal stripe. Skin with fine tuberculated striations. Hairs short, stiff, thick, and finely pilose. Rostrum short, broad, sharpened triangularly to tip, with two pairs of very short, pilose hairs. The 3-segmented, short palpus has short, relatively thick segments, the end segment with four short, pilose hairs. Thorax without eyes or chitinous plates but with the usual four pairs of hairs; between the two long sensory hairs the usual setae, and close anteriorly a pair of very small hairs; thoracic shoulder hairs longer, the 14 abdominal hairs of the usual arrangement and size. Few hairs ventrally; five pairs of small genital hairs, and five pairs of longer hairs more laterally. Two pairs of round genital cups. Anal opening indistinct (easily seen in Mexican material). Epimera of medium size, with one to three pairs of hairs; the two anterior pairs of

epimera have a single bent chitinous rod or plate. The legs relatively thick and short, about 200-240 μ long, with few pilose hairs. On the tarsi many flat, leaflike, pilose hairs; a small clavate seta on tarsi I and II; two weak claws and a pilose tarsal pad. Length about 360-400 μ , width 224-280 μ .

In Holland the mite was taken on *Limax* sp. In Mexico, D. F., the mites were found in some abundance running over the slimy part (the foot) of the snail *Helix pomatia* Linnaeus, which is European in origin. The mites were taken December 4, 1943.

Genus *Opsereynetes* Sig Thor
Opsereynetes simplexus, n. sp.

Fig. 2

Female.—Of medium size; thoracic furrow entire in fresh mounts; amber colored, with a lighter dorsal stripe and lighter legs and beak. Striations typical. Rostrum of normal size; venter with a pair of pilose hairs out under segment I of palpus, and a posterior pair of pilose hairs. Second mandibular segment long, narrow, slightly curved. Palpus of normal length, segment III reaching to about tip of rostrum, 22 μ long and 16 μ wide, with two pilose hairs about as long as segment IV; segment IV 11 μ long and 9 μ wide, rounded, with two pilose hairs about length of segment; segment V 10 μ long and 5.5 μ wide, constricted toward tip, with two pilose lateral hairs and a simple strong end hair. Cephalothorax with a pair of large eyes just outside and slightly anterior to the thoracic sensory hairs; all body hairs pilose; thoracic sensory hairs 83 μ long; the tiny pair of hairs just anterior to the sensory setae 5.5 μ long; longer pair 16.6 μ long, between the sensory setae. No chitinous shields seen. Dorsal abdominal hairs 19.5 μ long; posterior abdominal sensory setae 75 μ long. Anal opening on rear. Genital opening of female with five pairs of pilose hairs. Legs normal; legs I, III, and IV about 166 μ long, leg II 133 μ long; all leg hairs pilose, those on tarsi strong; tarsus I with a small, broad, clavate seta; tarsus II with a narrow clavate seta. Tarsal pads with hairs. Length with rostrum 266 μ , width about 100 μ .

¹ Received September 18, 1944.

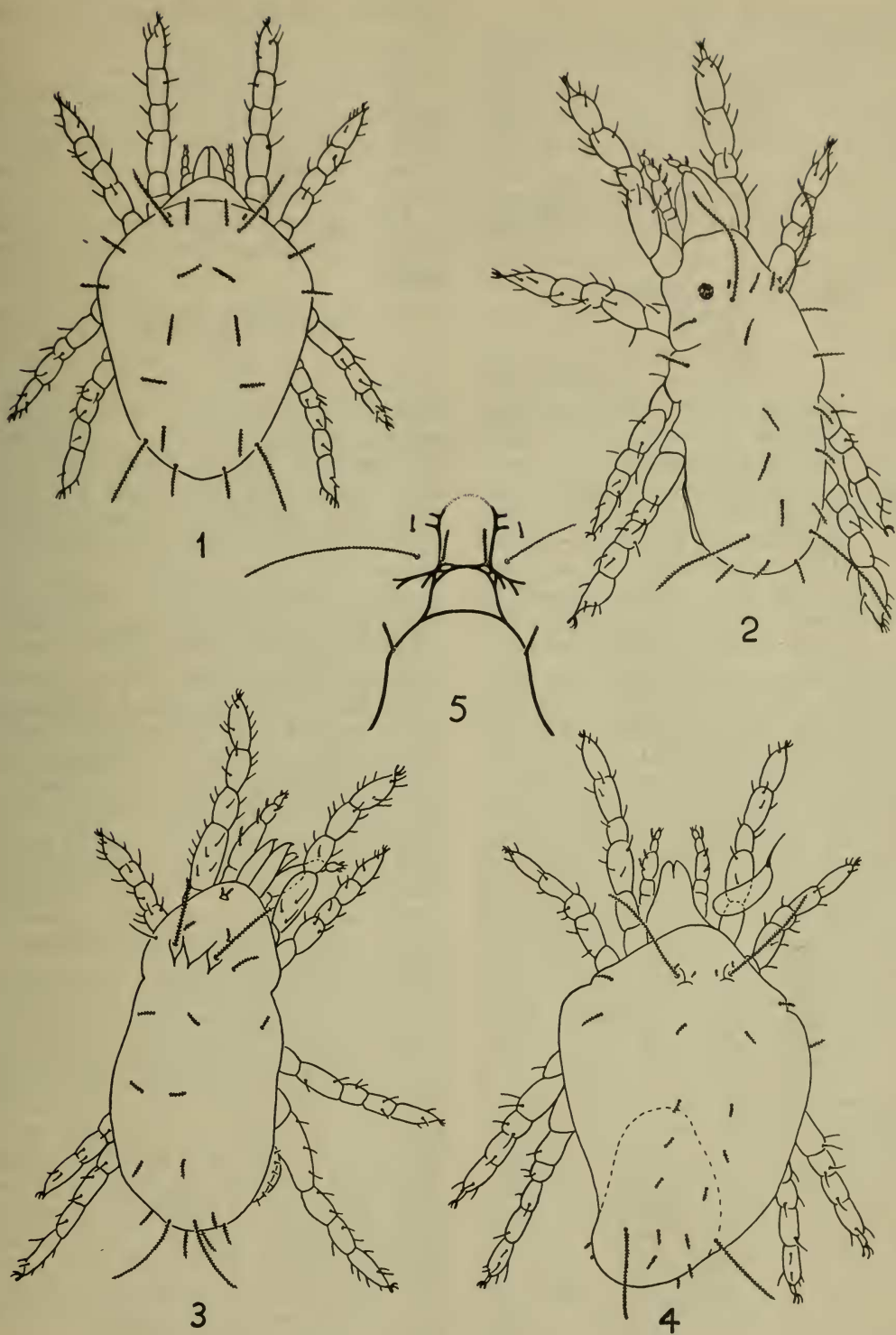


FIG. 1.—*Riccardoella oudemansi* Sig Thor, adult. FIG. 2.—*Opsereynetes simplexus*, n. sp., adult.
 FIG. 3.—*Opsereynetes tuberculatus*, n. sp., adult. FIG. 4.—*Opsereynetes robustus*, n. sp., adult. FIG. 5.
 —*Ereynetes sabinensis*, n. sp., camera-lucida drawing of dorsal shield.

Type.—U.S.N.M. 1468.

Type on slide with two paratypes from moss taken at the Desierto de los Leones, Mexico, December 5, 1943. A nymph was also collected from moss by Penelope, Carlos, and Sandra Plummer, November 19, 1943, at the same locality.

The lack of dorsal shields and presence of strong pilose hairs are distinctive of this species.

***Opsereynetes tuberculatus*, n. sp.**

Fig. 3

Female.—Of medium size; body furrow not seen dorsally but present laterally; light amber-colored body with lighter legs and beak. Finely striated. Rostrum of normal size, pointed; venter with a pair of fine pilose hairs out under segment I of palpus and a pair of anterior pilose hairs. Mandibular segment I not broad, sides about parallel; second mandibular segment short, stubby, slightly curved. Palpus shorter than that of the other species, segment III reaching about to tip of rostrum; segment III with one center and one distal hair, both pilose, the distal hair reaching about halfway out of segment IV; fourth segment oval, with three pilose hairs not so long as segment is wide; fifth segment about as long as fourth is wide, constricted toward tip, but rounded, with four or five end hairs, which appear pilose. Cephalothorax not distinct from abdomen dorsally; eyes not seen (probably dissolved by mounting fluid); sensory setae about 50μ long, fine, wire-like, pilose; laterad of sensory setae a pair of pilose hairs about 20μ long; anteriorly and slightly inside a pair of shorter pilose hairs, about 15μ long; in the center and anteriorly a small tubercle with two short pilose hairs about 10μ long. Shield lines all faint, hard to see (in some specimens not seen), consisting of a branch forking to include the sensory hair and apparently connected medianly by another forking line as illustrated. Abdominal body hairs about 12.5μ long, stiff, strong, pilose; posterior sensory hairs fine, pilose, of same length as thoracic sensory hairs. Ventral body hairs short, pilose, broadening slightly toward tip. Six pairs of pilose genital hairs; three pairs more laterad. Legs apparently normal, sparsely haired with blunt, heavy, short, pilose setae; length of legs: I, 166μ ; II and III, each 133μ ; IV, 155μ ; tarsus not blunt at tip; tarsal pads

with hairs. Length with rostrum 255μ , width 111μ .

Type.—U.S.N.M. 1469.

Type and paratype from moss from the Desierto de los Leones, Mexico, February 7, 1943. Also a paratype from the west slope of Mount Popocatepetl at about 9,000 feet, December 29, 1943.

The faint dorsal shield and lines and the anterior tubercle appear to be distinctive for this species.

***Opsereynetes robustus*, n. sp.**

Fig. 4

Female.—Of medium size; light amber in color; active. Body furrow not seen dorsally, present laterally; body broad in shoulders. Finely striated. Rostrum of normal size blunt at tip; venter with a single pair of posterior pilose hairs. Mandibles not sharp, somewhat blunt but broader at base; second mandibular segment long (about two-thirds as long as first segment), curved, somewhat thicker at base. Palpus of moderate length, segment III reaching past tip of rostrum; third segment with two pilose hairs, one in center and one on apex; fourth segment with one pilose hair the length of the segment; fifth segment small, round, with four or five end hairs, which appear to be simple. Cephalothorax short, not defined dorsally from abdomen; eyes not seen (probably dissolved by mounting fluid); anterior sensory setae fine, pilose, $66-77\mu$ long; inside anterior sensory setae a pair of short pilose hairs, and anterior and outside another pair of short pilose hairs; the thoracic shoulder hairs longer, of the size of the abdominal hairs. Thoracic shield lines hard to see, fine, short, in form of a half circle medianly of the sensory hairs and connected posteriorly to another fine, short line; not connected to one another. Dorsal abdominal hairs heavy, pilose, about 14μ long; abdominal sensory hairs about 56μ long, pilose. Five pairs of short pilose genital hairs; large egg in body, about 70μ times 110μ ; anal opening on rear. Legs of normal size: legs I and IV about 157μ long, II and III each, about 135μ long. Legs sparsely clothed with short, blunt, pilose hairs; tarsal tips stubby, with a pilose tarsal pad and normal claws. Length with rostrum about 292μ , width about 157μ .

Type.—U.S.N.M. No. 1470.

The type was found in moss collected by

Penelope, Carlos, and Sandra Plummer at the Desierto de los Leones, Mexico, November 19, 1943. The allotype (male) is on the type slide for *Ereynetes tuberculatus*, n. sp.

The body shape and the dorsal lines are distinctive.

Genus *Ereynetes* Berlese
Ereynetes sabinensis, n. sp.

Fig. 5

Female.—Medium sized; color not known, as described from mounted specimen. Finely striated. Rostrum somewhat long and narrow in proportion to body; venter with a pair of medium-length posterior pilose hairs and a pair of shorter anterior pilose hairs. Second mandibular segment of medium length, curved. Palpus slender; segment III slender, with two medium-length pilose hairs; segment IV with one medium-length pilose hair, segment V hard to

see but with several apparently simple hairs. Cephalothorax with dorsal chitinous pattern as shown by the camera-lucida drawing in Fig. 5, anterior portion either weakly or not at all connected. Thoracic sensory setae fine, pilose, about 78μ long; shoulder hair 25.5μ long; thoracic setae on shield pattern about 12.7μ long, the hairs anterior to these about half that length; all pilose and strong. Abdominal hairs about 16.6μ long, strong, pilose; posterior abdominal hairs shorter. Seven pairs of short, strong, pilose genital hairs. Legs normal; leg hairs strong, pilose. Length with rostrum 288μ , width 122μ .

Type.—U.S.N.M. No. 1471.

A single female was collected by Dr. F. Bonet in bat guano in the Cueva de los Sabinos, San Luis Potosí, April 3, 1942.

The thoracic shield pattern appears to be distinctive.

ZOOLOGY.—*A new starfish of the genus Luidia from the coast of Georgia.*¹ AUSTIN
H. CLARK, U. S. National Museum.

The genus *Luidia*, represented in all seas except the polar and subpolar, includes 45 species, of which nine occur in the western Atlantic, chiefly in the Tropics, two of these ranging to west Africa. The discovery of a well-marked new species of this genus in a region so well known as the southeastern United States is a matter of no little interest.

Luidia bernasconiae, n. sp.

Diagnosis.—A species of the *alternata* group (subgenus *Alternaster*) with 5 arms, numerous long and prominent paxillar spines, the actinal intermediate plates with pedicellariae, and the lateral paxillae each with a prominent pedicellaria.

Description.—R = 100 mm; r = 10 mm; breadth of ray at base 12 mm. The arms are slender, tapering evenly to a rather sharply rounded tip, rather thick, the abactinal surface flat and the sides, formed of the three outermost rows of paxillae, sloping abruptly down to the inferomarginals, as in *L. alternata*.

Above the inferomarginals there are three

regular longitudinal rows of paxillae arising from quadrilobate plates; these paxillae form regular transverse as well as longitudinal rows, each transverse row corresponding to an inferomarginal. The paxillae of the two outermost rows are similar, rather small, each isolated from its neighbors. The crown is more or less convex and bears about 15 rather stout cylindrical spinules with rounded tips, the length of which is slightly greater than the diameter of the crown. In addition to the spinules each paxilla bears on the distal side a conspicuous stout pedicellaria slightly longer than the spinules with two or three, very rarely four, valves. The paxillae of the third row alternate large and small. The small paxillae resemble those of the two outer rows, and each bears a conspicuous stout pedicellaria. The large paxillae, the diameter of which is two or even three times that of the small, bear a stout pointed central spine 3 mm in length the base of which is surrounded by 25 or 30 spines resembling those of the other paxillae, arranged in a complete outer and more or less incomplete inner row.

On the aboral surface between these three lateral rows on either side the paxillae are irregular in arrangement, smaller and lower, and arise from polygonal, often 5-sided, bases.

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